

ABSTRACT

Disclosed is a system for organizing and storing information about multiple peer identities. New certificates are introduced that enable a user to efficiently create, modify, and delete identities and groups. New storage structures enable the user to list and search through existing identities, groups, and their related certificates. An identity certificate contains information about a peer identity. A group root certificate is created by a user when he decides to create a new group. When the group creator user wishes to invite another entity to join the group, it creates another type of certificate called a group membership certificate. The group membership certificate is logically "chained" to the group root certificate. The invitee checks the validity of these certificates by checking that the chaining has been properly done. The invitee may then be allowed to invite other entities to join the group by sending out its own group membership certificates.